simultaneously to induce a flow of the developer fluid across a portion of the wafer surface toward the outer edge of the wafer surface;

allowing the developer fluid to puddle on the wafer surface for a predetermined dwell time to permit substantial completion of a developing chemical reaction to occur;

B1 cont.

dispensing a fresh charge of the developer fluid in addition to the previously dispensed developer fluid through the same multi-dispense nozzle; and

dispensing another quantity of substantially inert material through the same multi-dispense nozzle to rinse the wafer surface.

4. (Amended) The method of claim 1 further comprising the step of:

B2

dispensing another quantity of substantially inert material over a wafer surface subsequent to dispensing the fresh charge of developer fluid while rotating the wafer surface at relatively high speed.

Please add the following new claims 5-11:

5. The method as recited in claim 4 further comprising the step of:

spinning the wafer surface at relatively high speed to achieve a selected level of dryness.

6. The method as recited in claim 1, wherein the substantially inert material and the developer fluid are dispensed through the same multi-dispense nozzle while positioned within a single common predefined region above the wafer surface.

B3

7. A method for dispensing developer solution and deionized water to form patterned images onto a semiconductor wafer comprising the following steps of:

selecting a multi-port nozzle for dispensing at least one developer and deionized water;

dispensing an initial amount of deionized water onto a resist-coated substrate wafer through a first selected outlet formed in the multi-port nozzle to provide a layer of deionized water on the wafer prior to dispensing a developer fluid;

dispensing an initial charge of developer fluid onto the layer of deionized

 [...]rmed in the multi-port nozzle while substantially

simultaneously spinning the wafer to induce a flow of the developer fluid towards an outer edge of the wafer;

puddling the developer fluid on the wafer for a predetermined dwell time to permit substantial completion of the developing chemical reaction to occur;

dispensing a fresh charge of developer fluid from the multi-port nozzle in addition to the initial charge of developer fluid previously dispensed; and

dispensing another selected amount of deionized water through the first selected outlet formed in the multi-port nozzle in order to rinse the wafer.

8. The method as recited in claim 7, wherein the multi-port nozzle both dispenses the deionized water and the developer fluid from substantially the same position relative to the wafer.

9. The method as recited in claim 7, wherein the initial charge of developer fluid and the fresh charge of developer fluid consists of two different types of developer solutions.

B3 cont.

10. The method as recited in claim 9, wherein the fresh charge of developer fluid is dispensed through a third selected outlet formed in the multi-port nozzle.

11. A method for reducing precipitation of a developer reactant on a photoresist-coated wafer by lowering a sudden change in pH comprising the following steps of:

selecting only a single multi-port nozzle for dispensing at least one developer and deionized water;

dispensing an initial amount of deionized water onto a photoresist-coated substrate wafer through a first selected outlet formed in the multi-port nozzle to provide a layer of deionized water on the wafer prior to dispensing a developer fluid;

dispensing an initial charge of the developer fluid through a selected second outlet formed in the same multi-port nozzle while spinning the wafer to induce a flow of the developer fluid towards an outer edge of the wafer;

puddling the developer fluid on the wafer for a predetermined dwell time to permit substantial completion of the developing chemical reaction to occur;

dispensing a fresh charge of the developer fluid from the same multi-port nozzle in addition to the initial charge of the developer fluid previously dispensed; and

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B3 cont.

dispensing another selected amount of deionized water through the first selected outlet formed in the multi-port nozzle to rinse the wafer surface while spinning the wafer.

Attached hereto is a marked-up version of changes made to the specification by the current response. The attached page is captioned "Version With Markings Showing Changes Made".

REMARKS

This Amendment is in response to the Office Action dated May 21, 2002. The Examiner therein rejected claims 1-4.

Applicants amend claims 1 and 4 herein, and cancel claims 2-3. In addition, claims 5-11 are added herein. Claims 1 and 4-11 are thus pending. Reconsideration of these pending claims is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 1-4 are rejected under 35 U.S.C. 102(b) in view of Nakagawa (US Patent 5,885,755), and claims 2-4 are rejected under 35 U.S.C. 102(b) in view of Shibata (EP 0 794 463).

Neither of the references relied upon by the Examiner in the Office Action disclose or suggest the invention as now described in the pending claims. For example, each of the develop processes described in cited references involve using separate nozzles for the developer fluid and water. In Shibata, the developer is initially dispensed through a developer nozzle (5), and additional developer is then dispensed through another nozzle (10). [Figs. 3A and C, respectively.] Deionized water is subsequently applied through yet another nozzle (8) as shown in Fig. 3D of Shibata. Similarly, in Nakagawa, the developer is applied through the tip portion (21a) of a developer supplying nozzle while pure water is separately provided through the tip portion (31a) of a washing liquid supplying nozzle. [See Figs. 2A-F.] None of these references disclose or suggests the methods and processes as claimed herein.

Accordingly the Applicants contend that pending claims 1 and 4-11 are thus placed in a condition for allowance by the Examiner.